

Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.



WATER SUPPLY OUTLOOK FOR WASHINGTON

and

FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

UNITED STATES DEPARTMENT of AGRICULTURE...SOIL CONSERVATION SERVICE.

and

DEPARTMENT of CONSERVATION STATE of WASHINGTON

Data included in this report were obtained by the agencies named above in cooperation with the U.S. Forest Service, U.S. Geological Survey, National Park Service, and other Federal, State and Private organizations.

AS OF
JUNE 1, 1967

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season as they affect runoff will add to be an effective average. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1400 snow courses in Western United States and in the Columbia Basin in British Columbia. In the near future, it is anticipated that automatic snow water equivalent sensing devices along with radio telemetry will provide a continuous record of snow water equivalent at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data or reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

Listed below are water supply outlook reports based on Federal-State-Private Cooperative snow surveys. Those published by the Soil Conservation Service may be obtained from Soil Conservation Service, Room 507, Federal Building, 701 N. W. Glisan, Portland, Oregon 97209.

PUBLISHED BY SOIL CONSERVATION SERVICE

D. A. WILLIAMS, Administrator

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, Western Regional Technical Service Center, Room 507, 701 N. W. Glisan, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	P. O. Box "F", Palmer, Alaska 99645
Arizona	6029 Federal Building, Phoenix, Arizona 85205
Colorado (N. Mex.)	12417 Federal Building, Denver, Colorado 80202
Idaho	P. O. Box 38, Boise, Idaho 83701
Montana	P. O. Box 855, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1218 S. W. Washington St., Portland, Oregon 97205
Utah	4001 Federal Building, Salt Lake City, Utah 84111
Washington	840 Bon Marche Bldg., Spokane, Washington 99206
Wyoming	P. O. Box 340, Casper, Wyoming 82602

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388, Sacramento, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia



FEDERAL-STATE-COOPERATIVE
SNOW SURVEY AND WATER SUPPLY FORECASTS

For

WASHINGTON

Report Prepared
By

Robert T. Davis, Snow Survey Supervisor

Soil Conservation Service
840 Bon Marche Building
Spokane, Washington

Issued By

Orlo W. Krauter
State Conservationist
Soil Conservation Service
U. S. Department of Agriculture

H. W. Pollock, Supervisor
Division of Water Resources
Department of Conservation
State of Washington

WATER SUPPLY OUTLOOK

STATE OF WASHINGTON

June 1, 1967

* The water supply outlook for irrigation and power in the State of *
* Washington remains about the same as was reported last month. The *
* snowpack at the higher elevations continues to be well above normal *
* as of May 15 and June 1 despite the fact that there was below normal *
* precipitation during the month. Water supply forecasts should not be *
* materially less than were presented on May 1. Temperatures were gen- *
* erally below normal and the resultant runoff for the month was much *
* less than could have been expected. If the weather continues to be *
* alternately cool and dry and warm and dry, high volume flows will not *
* occur to the extent that could occur with warm, moist air and above *
* normal precipitation. There is still enough snow in the back country *
* to cause damaging flows if this latter condition occurs. Reservoirs *
* are still being held as low as possible in order to catch as much of *
* the expected peak flows as practical. *

SNOW COVER

May 15 and June 1 measurements of the snow courses in the State and tributary basins indicate a snow cover that is generally 75% greater than average and over 100% greater than that which occurred last year at this time. Most of these measurements are taken from the tributary basins in western Montana, northern Idaho and British Columbia. Only a few of the snow courses in Washington are measured on either of these dates. The situation this month is similar to that which occurred in 1964 when there was again a heavy snowpack in the mountains on June 1. There is only one snow course in Washington which is reported to have less snow this year than was reported last year. This course, Snoqualmie Pass, had a very ripe snowpack and the snow depleted much more rapidly than normal.

All of the soil moisture stations reported this month indicate a much better soil mantle condition moisturewise than has been reported the previous two years. Records are not long enough to establish a normal for these stations but the reports from the field indicate the soil mantles wetted to near capacity and much better than the men have seen for many years. This wetted snow mantle condition can be explained in part by the above normal snow cover earlier in the winter and the below normal temperatures which have occurred this spring.

STREAMFLOW

Forecasts of streamflows are not made by the Soil Conservation Service on June 1. Indications are that the amounts reported last month will not be materially changed except for possibly the May-June runoff period. It is

expected that the flows during the month of June will not be great enough to overcome the deficit created in May as well as that which occurred in April. Runoffs during the month of May ranged from 36% below normal to 7% below. The main stem of the Columbia River had a flow that ranged from 24% below normal to 18% below. The volume of water left to come down the Columbia River should be approximately the same as was forecast in the May 1 report; this based on the assumption of normal temperatures and precipitation during the rest of the runoff period.

RESERVOIRS

With the exception of Ross Reservoir on the Skagit River, Puget Sound drainage, all power reservoirs have less water in storage as of June 1 than normal. All of the irrigation reservoirs with the exception of Keechelus and Rimrock Lake have less water in storage. All reservoirs are expected to fill and spill during the forthcoming runoff period. The only reservoir that might not spill is the small reservoir in the Okanogan drainage, Salmon Lake. The inflow to this reservoir is very restricted which might account for this lack of filling. A good carry-over into the 1968 irrigation season is expected from all irrigation reservoirs in the State of Washington.

RESERVOIR STORAGE - 1000 Acre Feet

BASIN or STREAM	RESERVOIR	USABLE 1/ CAPACITY	Measured (June 1)			Normal*
			1967	1966	1965	
<u>COLUMBIA</u>						
Spokane	Coeur d'Alene Lake	225.1	355.8	172.2	272.4	357.9
Columbia	Franklin D. Roosevelt Lake	5232.0	3286.0	3843.2	3505.0	4381.2
Columbia	Banks Lake <u>2/</u>	761.8	420.2	551.9	363.6	463.3
Okanogan	Conconully Reservoir	13.0	9.1	1.5	5.3	11.8
Okanogan	Salmon Lake	10.5	6.8	8.2	9.2	9.9
Chelan	Lake Chelan	676.1	317.3	394.2	582.0	490.2
<u>YAKIMA</u>						
Yakima	Keechelus Lake	157.8	144.0	144.3	153.2	140.5
Kachess	Kachess Lake	239.0	210.8	230.7	232.6	229.4
Cle Elum	Lake Cle Elum	436.9	378.8	399.8	411.8	410.3
Bumping	Bumping Lake	33.7	27.3	19.9	24.8	33.1
Tieton	Rimrock Lake	198.0	184.6	164.1	194.1	184.3
<u>PUGET SOUND</u>						
Skagit	Ross Reservoir <u>2/</u>	1202.9	1059.6	927.6	1126.7	854.3
Skagit	Diablo Reservoir	90.6	84.5	84.0	82.6	84.2
Skagit	Gorge Reservoir	9.8	7.6	8.1	8.0	--

1/ Based on Active Storage

2/ Less than 15-year record in period 1948-62

* 15-year average 1948-62

SOIL MOISTURE - JUNE

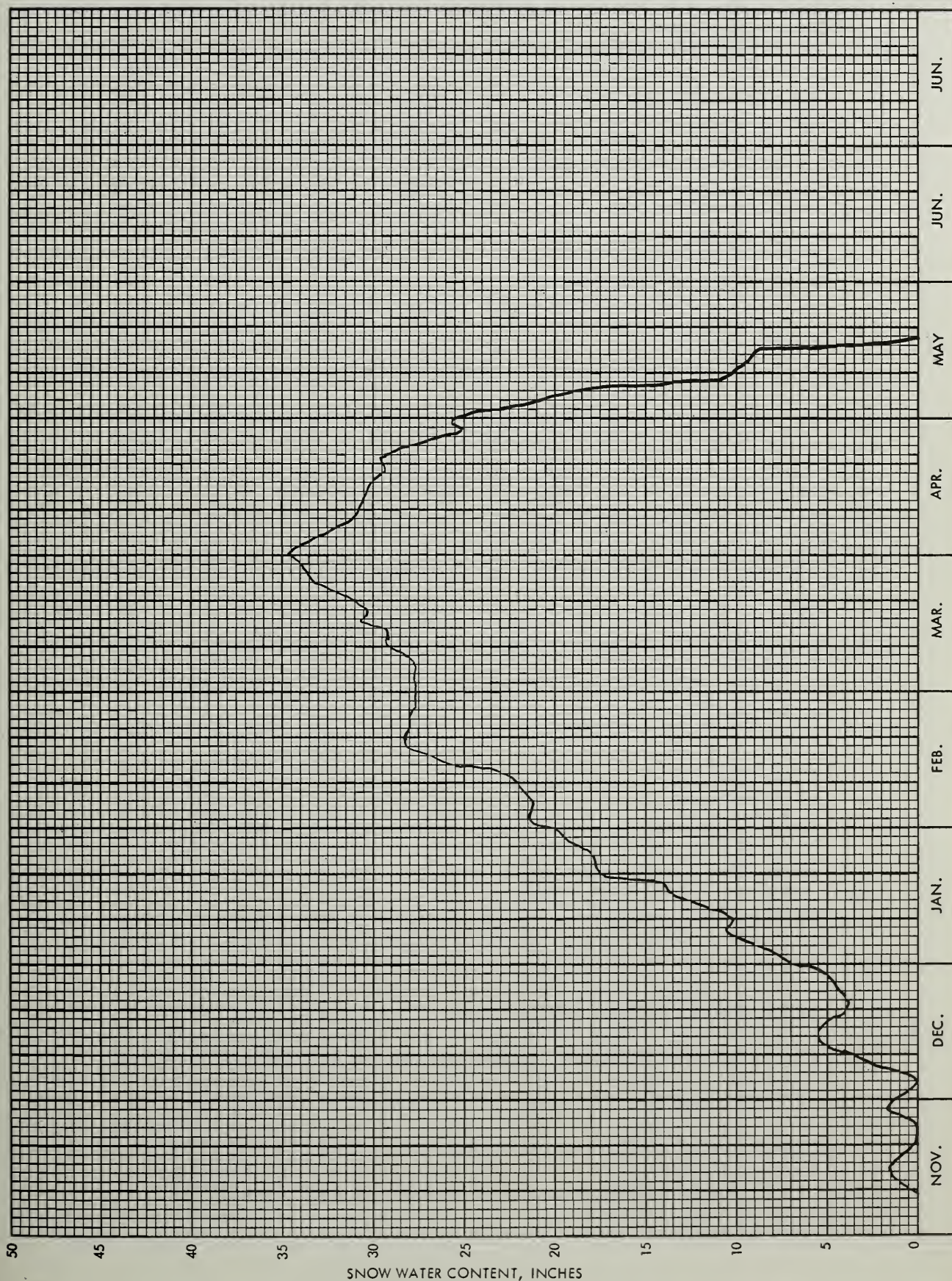
Drainage Basin and Station	Number	Elev.	Profile Depth	(Inches) : Total : Capacity:	Soil Moisture Content (Inches) as of June 1 1967 1966 1965		
<u>CRAB CREEK</u>							
Creston-Kunz	18B1m	2440	48	13.6	9.9	8.5	9.0
Jack Woods	18B3m	2600	48	13.6	9.5	7.7	7.8
Krause	18B4m	2440	48	13.6	8.8	8.6	8.2
Sheffels	18B5m	2360	48	13.6	8.3	6.7	8.3
Sherman	18B7m		48	13.6	8.3	--	--
Wheatridge	18B6m	2200	48	13.6	8.2	6.2	6.5
<u>OKANOGAN</u>							
Trout Creek	3-M	3600	48	7.3	Late Report	4.9	--
<u>YAKIMA</u>							
Domery Flat	21B20m	2200	48	6.9	Late Report	4.1	4.2
Lake Cle Elum	21B14M	2200	48	12.8	Late Report	9.0	9.5
<u>WALLA WALLA</u>							
Couse	17C3m	3650	48	11.1	9.0	7.1	10.5
Helmerts	17C2M	4400	48	12.0	11.7	10.2	11.9
<u>WENATCHEE</u>							
Upper Wheeler	20B7M	4400	48	12.7	Late Report	9.0	9.0
Salmon Meadows	19A2M	4500	48	5.4	Late Report	3.6	--

FALL SOIL MOISTURE

Drainage Basin and Station	Number	Elev.	Profile Depth	(Inches) : Total : Capacity:	Soil Moisture Content (Inches) as of June 1 1966 1965 1964		
<u>CRAB CREEK</u>							
Creston-Kunz	18B1m	2440	48	13.6	5.0	4.9	5.4
Jack Woods	18B3m	2600	48	13.6	4.3	5.0	4.4
Krause	18B4m	2440	48	13.6	5.1	5.8	5.9
Sheffels	18B5m	2360	48	13.6	3.8	4.0	3.7
Sherman	18B7m						
Wheatridge	18B6m	2200	48	13.6	4.1	4.2	4.1
<u>OKANOGAN</u>							
Trout Creek	3-M	3600	48	7.3	3.8	4.1	4.9
<u>YAKIMA</u>							
Domery Flat	21B20m	2200	48	6.9	2.4	1.9	4.4
Lake Cle Elum	21B14M	2200	48	12.8	6.4	6.9	8.5
<u>WALLA WALLA</u>							
Couse	17C3m	3650	48	11.1	5.7	6.0	5.5
Helmerts	17C2M	4400	48	12.0	6.7	6.2	6.0
<u>WENATCHEE</u>							
Upper Wheeler	20B7M	4400	48	12.7	5.7	6.2	5.3
Salmon Meadows	19A2M	4500	48	5.4	3.0	1.9	--

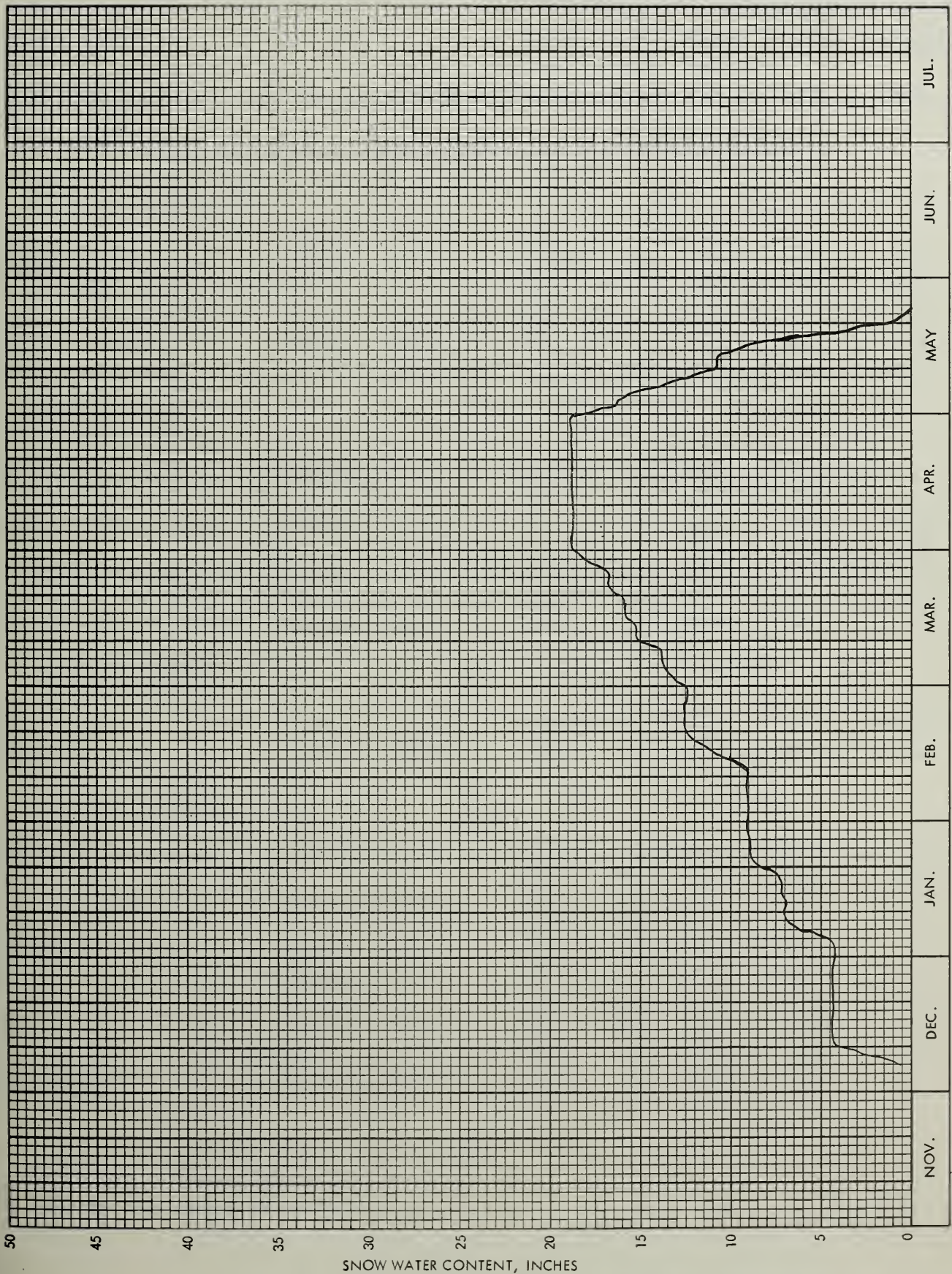
SNOW PILLOW DATA
EBA Pillow - Snoqualmie Pass

Sec. 4 T. 22N R. 11E No. 21B33SP Drainage: Yakima
Lat. 47°25' Long. 121°25' Elev. 3020'



SNOW PILLOW DATA
Cougar Mountain - FS

Sec. 28 T. 21N R. 9E No. 21B42SP Drainage: Green River
Lat. _____ Long. _____ Elev. 3200'



APPENDIX 1

SNOW DATA MAY 1 to JUNE 1, 1967

DRAINAGE BASIN and SNOW COURSE	No.	Elev.	Date of Survey	SNOW COVER MEASUREMENT				
				1967	: P a s t R e c o r d			
				Snow Depth (In.)	Water : Content: (In.)	Water Content (In.)		1948-62
						:1966	1965	Avg.
U P P E R C O L U M B I A D R A I N A G E								
P E N D O R E I L L E R I V E R								
Benton Spring	16A3	4900	5/29	5	2.3	--	0.0	--
Lookout	15B2	5250	5/15	93	41.1	18.3	26.4	--
			6/1	47	22.8	0.0	14.8	--
Nelson	Canada	3050	5/15	3	1.3	0.4	1.7	0.8**
Schweitzer Bowl	16A6	4500	5/31	11	5.7	0.0	0.0	--
Schweitzer Ridge	16A5	6100	5/31	94	48.5	28.3	39.3	--
K E T T L E R I V E R								
Big White Mountain	Canada	5500	5/14	60	26.4	9.2	--	--
			5/30	35	17.2	3.6	--	--
Monashee Pass	Canada	4500	5/15	28	13.3	7.3	6.9	10.3**
			5/31	6	3.1	0.6	1.0	2.8**
Old Glory Mountain	Canada	7000	5/15	98	45.6	28.2	25.7	28.7**
			5/30	64	33.5	11.5	16.8	17.3**
Upper Trapping Creek	Canada	4450	5/14	8	3.2	--	--	--
S P O K A N E R I V E R								
Granite Peak	15B13A	6000	5/27	94	46.4	26.0	36.6	--
Medicine Ridge	15B4A	6150	5/28	96	45.8	28.8	40.6	--
O K A N O G A N R I V E R								
Blackwall Mountain	Canada	6250	5/15	92	44.9	26.6	32.3	35.2**
			6/1	65	36.4	18.8	31.2	28.0**
Bouleau Creek	Canada	5000	5/15	21	7.6	--	--	--
			5/28	3	1.2	--	--	--
Brookmere	Canada	3200	5/15	8	3.0	--	--	--
Enderby	Canada	6250	5/13	123	58.0	36.4	40.1	--
			5/26	103	48.6	38.0	39.4	--
Hamilton Hill	Canada	4900	5/13	43	17.1	0.0	3.3	5.5**
			5/27	14	6.4	0.0	0.0	0.3**
Isontok Lake	Canada	5510	5/15	24	8.8	0.0	--	--
			5/29	4	1.8	--	--	--

** Average for years of record

APPENDIX 2

			SNOW COVER MEASUREMENT					
			1967	: P a s t R e c o r d				
DRAINAGE BASIN			Date	Snow	Water	: Water Content (In.)		1948-62
and			of	Depth	Content:			
SNOW COURSE	No.	Elev.	Survey	(In.)	(In.)	:1966	1965	Avg.
<u>OKANOGAN RIVER (Cont.)</u>								
Lost Horse Mountain	Canada	6300	5/16	35	12.7	--	9.4	10.1**
			Late Report			0.0	5.1	3.7**
Lower Esperon Creek	Canada	4270	5/31	0	0.0	0.0	--	--
McCulloch	Canada	4200	5/15	2	0.8	0.0	0.5	0.7**
Middle Esperon Creek	Canada	4580	5/31	0	0.0	0.0	--	--
Missezula Mountain	Canada	5100	5/15	24	8.6	--	0.0	1.8**
			6/1	0	0.0	--	0.0	0.0
Mission Creek	Canada	4500	5/13	59	25.3	19.7	18.8	18.8**
			5/30	37	18.2	9.1	12.6	10.5**
Monashee Pass	Canada	4500	5/15	28	13.3	7.3	6.9	10.3**
			5/31	6	3.1	0.6	1.0	2.8**
Mt. Kobau	Canada	5950	5/14	46	18.5	3.5	--	--
			5/28	19	8.5	0.0	--	--
Nickel Plate Mountain	Canada	6200	5/15	33	12.5	--	--	--
Postill Lake	Canada	4500	5/15	14	4.6	--	--	--
Silver Star Mountain	Canada	6050	5/12	79	38.9	20.4	19.4	23.5**
			5/30	49	27.0	10.2	11.0	13.6**
Upper Esperon Creek	Canada	4290	5/31	13	6.7	0.4	--	--
<u>CHELAN LAKE BASIN</u>								
Cloudy Pass +	20A22a	6500	5/18	128	57.6	--	--	--
			5/25	120	54.0	--	--	--
Lyman Lake +	20A23A	5900	5/18	152	68.5	--	--	--
			5/25	131	62.9	--	--	--
<u>ENTIAT RIVER</u>								
Entiat Meadows +	20A33a	4800	5/12	106	42.6	--	--	--
			5/18	86	38.7	--	--	--
			5/25	72	34.6	--	--	--
Entiat River Trail +	20A34a	3150	5/12	15	6.0	--	--	--
			5/18	0	0.0	--	--	--
Pope Ridge	20B20	4300	5/10	11	4.5	--	--	--
Pugh Ridge +	20A32a	6400	5/12	94	37.8	--	--	--
			5/18	74	33.3	--	--	--
			5/25	49	23.5	15.5	--	--

+ Snow water equivalent estimated from aerial stadia marker

** Average for years of record

APPENDIX 3

			SNOW COVER MEASUREMENT					
			1967	: P a s t R e c o r d				
DRAINAGE BASIN and SNOW COURSE	No.	Elev.	Date of Survey	Snow Depth (In.)	Water Content: (In.)	Water Content (In.)	1948-62 Avg.	
<u>ENTIAT RIVER (Cont.)</u>								
Snow Brushy +	20A35a	3850	5/12	59	23.7	--	--	--
			5/18	35	15.8	--	--	--
			5/25	17	8.5	9.0	--	--
Tommy Creek +	20B21a	5300	5/12	42	16.9	--	--	--
			5/18	18	8.1	--	--	--
			5/25	6	3.0	0.0	--	--
Fox Camp +	20A36a	6510	5/12	148	59.5	New Aerial Marker		
			5/18	124	55.8	--	--	--
			5/25	118	53.1	--	--	--
<u>WENATCHEE RIVER</u>								
Blewett Pass No. 2	20B2	4070	5/10	14	6.3	0.0	0.0	--
#Fish Lake	21B4	3371	5/11	47	21.8	4.1	0.0	--
			5/22	18	6.4	--	--	--
#Lyman Lake +	20A23A	5900	5/18	152	68.5	--	--	--
			5/25	131	62.9	--	--	--
Stevens Pass	21B1	4070	5/15	121	56.6	31.7	41.2	48.7*
			5/29	89	41.0	15.7	31.9	29.5*
<u>YAKIMA RIVER</u>								
Big Boulder Creek	21B9	3200	5/10	0	0.0	--	--	--
			5/22	0	0.0	--	--	--
#Blewett Pass #2	20B2	4070	5/10	14	6.3	0.0	0.0	--
Bumping Lake	21C8	3450	6/1	0	0.0	0.0	0.0	5.0*
Cooper Pass	21B36	3300	5/11	40	20.4	3.2	--	--
			5/23	2	0.4	--	--	--
Hyak	21B34	2600	5/10	0	0.0	--	--	--
			5/22	0	0.0	--	--	--
Kachess Dam	21B38	2220	5/10	0	0.0	--	--	--
			5/22	0	0.0	--	--	--
Kachess Peninsula	21B37	2280	5/10	0	0.0	--	--	--
			5/22	0	0.0	--	--	--
Fish Lake	21B4	3371	5/11	47	21.8	4.1	--	--
			5/22	18	6.4	--	--	--

- # Not located directly on this drainage
+ Snow water equivalent estimated from aerial stadia marker
* Adjusted 1948-62 average

APPENDIX 4

			SNOW COVER MEASUREMENT					
			1967	: P a s t R e c o r d				
DRAINAGE BASIN and SNOW COURSE	No.	Elev.	Date of Survey	Snow Depth (In.)	Water Content: (In.)	Water Content (In.) 1948-62		
						:1966	1965	Avg.
<u>YAKIMA RIVER (Cont.)</u>								
Morgan Creek	21B40	2320	5/10	0	0.0	0.0	--	--
			5/22	0	0.0	0.0	--	--
Salmon La Sac	21B39	2340	5/10	0	0.0	--	--	--
Snoqualmie Pass	21B33	3020	5/12	18	9.0	25.4	--	--
#Stampede Pass	21B10	3000	5/9	102	50.2	26.8	--	--
			5/23	72	36.6	19.0	--	--
			5/30	52	26.7	5.3	--	--
Tunnel Avenue	21B8	2450	5/10	16	6.1	3.8	4.5	9.2*
			5/20	0	0.0	0.0	0.0	--
White Pass (E. Side)	21C28	4500	5/15	58	25.4	14.1	17.6	25.4*
			5/29	36	16.8	0.0	12.1	--
#Olallie Meadows	21B2	3625	5/10	103	49.8	34.7	--	--
			5/19	91	45.7	32.3	--	--
			5/31	67	35.2	20.6	--	--
<u>LOWER COLUMBIA DRAINAGE</u>								
<u>COWLITZ RIVER</u>								
#White Pass (E. Side)	21C28	4500	5/15	58	25.4	14.1	17.6	25.4*
			5/29	36	16.8	0.0	12.1	--
<u>PUGET SOUND DRAINAGE</u>								
<u>SNOQUALMIE RIVER</u>								
Olallie Meadows	21B2	3625	5/10	103	49.8	34.7	--	--
			5/19	91	45.7	32.3	--	--
			5/31	67	35.2	20.6	--	--
#Snoqualmie Pass	21B33	3020	5/12	18	9.0	25.4	--	--
<u>SKYKOMISH RIVER</u>								
#Stevens Pass	21B1	4070	5/15	121	56.6	31.7	41.2	48.7*
			5/29	89	41.0	15.7	31.9	29.5*

Not located directly on this drainage

* Adjusted 1948-62 average

APPENDIX 5

			SNOW COVER MEASUREMENT					
			1967	: P a s t R e c o r d				
DRAINAGE BASIN and SNOW COURSE	No.	Elev.	Date of Survey	Snow Depth (In.)	Water Content: (In.)	Water Content (In.)	1948-62 Avg.	
<u>BAKER RIVER</u>								
Dock Butte	21A11A	3800	5/15	184	92.1	70.5	62.6	--
			6/1	144	74.0	62.3	--	--
Easy Pass	21A7A	5200	5/15	222	109.8	81.5	83.5	--
			6/1	183	96.4	75.8	--	--
Jasper Pass	21A6A	5400	5/15	248	121.7	93.1	84.3	--
			6/1	212	112.0	86.7	--	--
Marten Lake	21A9A	3600	5/15	202	102.2	79.0	71.7	--
			6/1	167	86.6	72.2	--	--
Rocky Creek	21A12A	2100	5/15	56	28.6	13.7	3.0	--
			6/1	13	6.7	0.0	--	--
Schreibers Meadow	21A10A	3400	5/15	157	78.7	63.0	54.8	--
			6/1	122	65.0	51.8	--	--
S. F. Thunder Creek	21A4A	2200	5/15	0	0.0	0.0	0.0	--
Sulphur Creek	21A13	1600	5/15	0	0.0	0.0	0.0	--
Watson Lakes	21A18A	4500	5/15	184	88.7	70.6	65.1	--
			6/1	155	77.7	65.8	--	--
<u>NOOKSACK RIVER</u>								
Bald Mountain +	21A19a	4400	6/1	100	52.0	--	--	--
Twin Lakes +	21A21a	5200	6/1	198	103.0	--	--	--
<u>GREEN RIVER</u>								
Stampede Pass	21B10	3000	5/9	102	50.2	26.8	--	--
			5/23	72	36.6	19.0	--	--
			5/30	52	26.7	5.3	--	--

Agencies Assisting with Snow Surveys

GOVERNMENT AGENCIES

Canada:

Department of Lands, Forests and Water Resources,
Water Resources Service, British Columbia

States:

Washington State Department of Conservation
Washington State Department of Natural Resources

Federal:

Department of the Army
Corps of Engineers
U. S. Department of Agriculture
Forest Service
U. S. Department of Commerce
Weather Bureau
U. S. Department of the Interior
Bonneville Power Administration
Bureau of Reclamation
Geological Survey
National Park Service

PUBLIC AND PRIVATE UTILITIES

Chelan County P.U.D.
Pacific Power and Light Company
Puget Sound Power and Light Company
Washington Water Power Company

OTHER PUBLIC AGENCIES

Okanogan Irrigation District
Wenatchee Heights Irrigation District

MUNICIPALITIES

City of Walla Walla
City of Tacoma
City of Seattle

Other organizations and individuals furnish valuable information for snow survey reports. Their cooperation is gratefully acknowledged.

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
ROOM 840, BON MARCHE BLDG.
SPOKANE, WASHINGTON 99201

OFFICIAL BUSINESS

POSTAGE AND FEES PAID
U. S. DEPARTMENT OF AGRICULTURE

FIRST CLASS MAIL

FEDERAL - STATE - PRIVATE
COOPERATIVE SNOW SURVEYS

Furnishes the basic data
necessary for forecasting
water supply for irrigation,
domestic and municipal water
supply, hydro-electric power
generation, navigation,
mining and industry

*"The Conservation of Water begins
with the Snow Survey"*